

# Out of Sight, Out of Mind: Turnover Intentions through an eLeadership Lens

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## Abstract

*The basis for this research is founded on the emerging eLeadership theory and the need for retention of qualified leadership in organizations that either are required to or elect to adopt information communication technology (ICT). Development of the eLeadership theory is still in its nascent stage and thus the use of theoretical foundations it is built upon are used to measure and understand the influencing factors of an eLeader's turnover intention. The researchers in this study propose a research model of eLeader's turnover intention and develop propositions using eLeader's relationship with followers, transformational leadership ability, technology self-efficacy, and organizational engagement as its core constructs. Data from this research is proposed to be collected using qualified surveys and findings. This research is expected to make a significant contribution and enrich the developing body of eLeadership literature so that more empirical data is available for future researchers interested in measuring constructs related to eLeadership.*

## 1. Introduction

Information and Communication Technology (ICT) continues to drive an organizations performance and interaction between leader and follower. Contemporary organizations using ICT is allowing leaders and followers to communicate synchronously through multiple modes of technology. The increase of communication is requiring leaders to learn effective way of leading while using ICT. Savolainen [1] suggests that "the help of advanced IT, changes are brought about in attitudes, feeling, thoughts, behavior and organization" (p.289). eLeadership theory provides a foundation for leaders and is defined as the ability to increase the quality of communication between leader and follower while using ICT. The eLeadership theory is built upon foundations of both servant and transformational leadership theory with the adoption

and use of ICT to increase follower and organizational performance [2].

Organizations continue to build their ability to conduct business using emerging technologies that connect individuals at much faster rates than using antiquated technologies. Current technologies allow for increased communication and knowledge sharing by both leader and follower [3]. Emerging technologies call for the development of an eLeader that manages contemporary technology heavy organizations. The addition of new technologies can also produce negative perceptions of ICT and thus create the need for a leader to learn added communication pathways that assist in enhancing emerging technologies.

eLeadership theory stems from research conducted by Avolio, Kahai, and Dodge [4] that defined how organizations utilize technology to make collective decisions. Although theoretical in design, the eLeadership theory as a concept cannot be tested by a single instrument. The eLeadership construct has a rich history of measurement by using the basic seminal constructs of servant and transformational leadership. eLeadership has been explored by many authors as a theoretical concept to determine various organizational attributes that affect output efficacies [5].

The development of this study is looking to address the potential relationship among variables in the eLeadership theory that have a potential link to leadership turnover intention, which refers to an employee's plan to leave their company or job voluntarily. Current eLeadership research, although still in its nascent stage, describes how a leader can work more effectively while using ICT [2]. The eLeadership research still does not yet address retention of leadership in organizations that adopt ICTs. Previous literature suggests that employee retention, more importantly leaders, can improve communication and organizational commitment. Developing an understanding of leadership retention is important because organizations that adopt ICTs can become chaotic if proper steps are not taken to communicate the implementation of the ICT effectively [6]. The variables used in this research would add to the understanding of how leadership

perceives: technology self-efficacy, organizational engagement, relationship with followers, and transformational leadership ability. Addressing these specific variables should add to the understanding of why leadership would intend to quit an organization [7]. Retaining these tech savvy, loyal, and trustworthy leaders promote growth and adoption of new ICT. Evidence from this study also adds empirical evidence to eLeadership research [5]. Finally, development of an leadership turnover model provides researchers with the ability to contribute to eLeadership and the development of organizations faced with ICT implementation.

The purpose of this study is to explore the eLeadership theory as it relates to leadership turnover in organizations that rely heavily on ICT. Although the eLeadership theory is comprised of two major leadership theories namely, servant and transformational leadership, this study will examine how the use of transformational leadership, leader's relationship with followers, their organizational engagement, and efficacy of using ICT effects the likelihood leadership has turnover intention. Following a brief literature review, each of these variables then develop a research model to understand relationships among them.

In the next section, we provide a brief review of the literature related to eLeadership. The literature review is followed by theoretical foundations and research model, which includes development of propositions. Next, we discuss methodology for collecting data and validating the research model. Finally, we provide expected results and conclude with a brief discussion on the next steps.

## 2. Literature Review

With eLeadership as an overarching framework, our literature review primarily focuses on the empirical studies involving eLeadership. A search for eLeadership as the subject in the academic literature resulted in a small number of articles. Most of them are conceptual papers in their nascent stage and a very few are empirical studies involving eLeadership components.

eLeadership is a trending theory that is designed to develop the efficacy of leadership when using ICT in an organizational setting. It has been defined as "a process of social influence where, mainly with the help of advanced IT, changes are brought about in attitudes, feelings, thoughts, behavior and organization" [1, p. 289]. The introduction of ICT into an organization creates an environment that challenges the role of the leadership, requiring an increase of empathetic and

interpersonal communication between leader and follower. Although changes in communication patterns are obvious to the virtual and face-to-face communication, we also see a need for eLeadership when storing, interpreting, and disseminating information [2] [8]. Organizations that are seeking the implementation of ICT will need eLeaders to be early adopters of ICT and confident in the ability to promote followers that are in some situations forced to adopt ICT [9]. Leaders looking to adopt the attributes of an eLeader will still have the need for traditional leadership skills, such as transformational and servant leadership skills, but instead of face-to-face communication, organizations will focus on the use of ICT [10].

Integration of ICT has been a part of contemporary organizations since the 1970's when technology first began to change organizational communication patterns. Over the years, organizations have introduced various ICTs including email, instant messaging (IM), groupware, and information management systems which have assisted members of these organizations to make swift collective decisions [4] [8]. Although ICT has increased the speed of communication and decision making by the members of an organization, it has also assisted in the development of virtual teams which aid in technology-mediated communication [11].

Leader-follower relationships have developed over the past century and studied more in the last half century. The more recent implementation of technology is now making it harder to monitor followers due to temporal and spatial restrictions. Leaders are now required to use ICT to lead their followers while using strong denotative communication. Due to the lack of face-to-face communications, the eLeader is responsible for developing follower strengths, enhancing interpersonal relationships, and making connections with organizational goals using ICT [12]. The use of ICT can also provide followers with a sense of anonymity and thus increase the challenges of collaboration. When developing the follower, it is important for eLeaders to allow them to have a dyadic relationship with the eLeader which should include decision-making and taking initiative [13] [14]. If the follower does not have the ability to question decisions, the eLeader's credibility could be at risk based on access to information from credible websites. eLeaders could possibly lose their followers loyalty if they don't let them take initiative.

In contemporary organizations, virtual teams that communicate using ICT over a distance instead of traditional face-to-face interactions are becoming more common. Virtual teams have created a culture that relies on ICT to facilitate communication between

remote teams or teleworkers [2] [11]. eLeaders that work with virtual teams are also faced with many communication barriers, such as: technical, political, problem-solving, goal-orientation, and self-esteem [15]. Virtual teams need to remember that dispersed members can use rhetoric in their subculture that might not be acceptable for other virtual team members. Therefore, it is the responsibility of the eLeader to use a denotative rhetoric that is acceptable to the organization [2].

Traditional organizations can rely on traditional face-to-face interactions to manage organizational engagement, whereas contemporary organizations could see a reduction in face-to-face communication due to the use of ICT and increase on virtual teams or remote workers. The eLeader must then know that their leadership skills have a direct correlation to follower empowerment and organizational engagement [13]. It should not be assumed by leadership that the organizational acumen or prior knowledge of technology increase team follow-through. Instead, eLeaders need to assure that followers are not isolated, and they do not feel as if their voice is not heard by leadership [16]. By engaging followers and reducing isolation, the eLeader then can create a virtual environment where both leader and followers feel engaged and desire to continue working with the organization. eLeaders interested in increasing organizational engagement should be asking for and expecting feedback from all members of the organization. When eLeaders engage in discourse and receive feedback they then can promote organizational espoused values and active participation [17].

Leadership can be linked to the development of an organization and profitability for millennium; however, in the current digital age, we are seeing followers that have access to parallel amounts of information as their leader which in turn changes the leader-follower relationship [18]. The eLeader must have the ability to promote the follower, celebrate productivity, and improve interpersonal communication due to the explicit use of ICT and lack of face-to-face communication. These actions by the eLeader should then increase positive discourse [12]. Not only does the eLeader need to focus on the increased positive discourse, but an eLeader needs to be able to change the perceptions of the follower, to that of an independent and active member of the organization [14]. eLeaders that practice these actions should thus reduce turnover intentions of leadership as relationships between followers improve.

Working in an organization that relies on ICT not only influences followership behavior, but also the perceptions of the leader. Contemporary organizations need leaders that understand how ICT is and how their

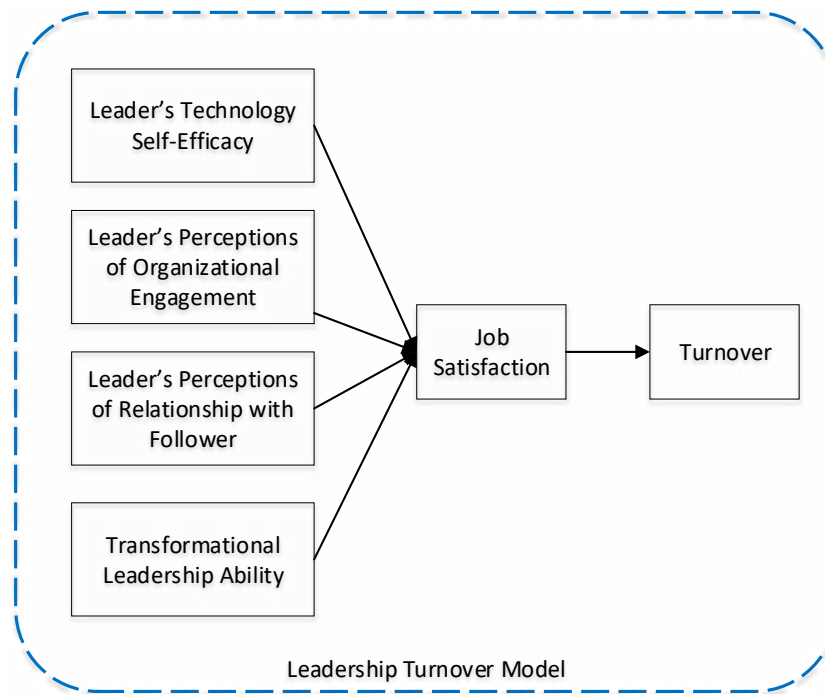
leadership rhetoric affects follower behavior. The eLeader should exhibit attributes linked to that of a transformational leader, or someone that is interested in taking an optimistic approach to developing followers using ICT while keeping follower anxiety levels at a minimum [19] [20]. If organizations do not promote attributes of transformational eLeadership, feelings of isolation can develop and lead to a feeling of eLeaders as being untrustworthy and disingenuous [21]. Finally, eLeaders could find that ignoring followers' development can lead to lowered job satisfaction rates and an increase in follower attrition. If eLeaders find that they are experiencing an increase in follower attrition, it is then probable that leaders will also find a lowered job satisfaction and increased attrition (intention to quit).

### 3. Theoretical Foundations and Research Model

Foundations for this research model are based on the relationship that eLeadership : organizational engagement, relationship with followers, transformational leadership, and technology self-efficacy. The eLeader, as a successful member of an organization, should be able to work with members of dispersed virtual teams via ICT and maintain a solid working relationship with their followers. eLeaders that work well with virtual teams should also exercise their transformational leadership skills to promote and motivate followers using multiple ICTs.

In this study, we envisage eLeadership components, viz., eLeader's Organizational Engagement, eLeader's Relationship with Followers, Transformational Leadership Ability, and eLeader's Technology Self-Efficacy, as determining factors of an eLeader's job satisfaction, which in turn can influence their intention of quitting the job (See Figure 1).

eLeadership has its roots in the development of group decision support systems (GDSS) and electronic brainstorming (EBS) technologies of the late 20th century [6]. Leaders using GDSS and EBS software are tasked with transforming their followers into productive teams that can interact via ICT, creating symbiotic virtual relationships between members. Avolio and Kahai [2], suggest that eLeaders should ask how the integration of ICT affects relationships between eLeader and follower's interpersonal communication when working in virtual environments that rely heavily on virtual teams that function with members divided by cultural values and time zones (p. 325; p. 334).



**Figure 1. Research Model**

Introduction of new ICT places stress on leadership to implement and encourage staff to use the new technology. The development of an eLeader can also help the organization when it comes to accepting and implementing ICT [9]. Effective eLeaders should also encourage staff to learn and adapt new communication techniques with both internal and external partners through use of ICT [10]. Leadership theory reminds us that when training the eLeader, we should build upon our interpersonal communication acumen and translate how ICT can improve clarity and speed of communication through a transformational leadership approach [22]. Once organizations have adopted the eLeadership strategy into the organization, high-level decision making, and improved ICT communication is possible [23].

Organizations that develop eLeaders with transformational leadership traits are interested in promoting values that create a culture of inclusion, motivation, stimulation, and consideration. Transformational eLeaders are interested in engaging followers using ICT to ensure all members of the team have a voice, which leads to discourse that promotes organizational values [21]. These transformational leadership attributes add to that of a transactional leader by building confidence within the team instead of building a need for reward, as in a transactional leadership style [24][25][26]. The increase in team

performance, whether a brick-and-mortar or virtual setting, can be influenced by transformational eLeadership qualities and by the level of engaged discourse an eLeader exhibits [6]. The production of shared understandings is imperative for a successful virtual team that uses multiple ICTs to communicate data between members and departments. If eLeaders do not promote the use of shared understandings in their virtual teams, the teams could have a higher propensity to quit [27]. Finally, the transformational eLeader should continue to build values with their team that celebrate the use of ICT communication to promote collaboration, socialization, and organization [28].

### 3.1. Job Satisfaction and Turnover Intention

Job satisfaction refers to an individual's satisfaction with his or her work. For this study, taken from Morris and Venkatesh [29], it is defined as "the extent of positive emotional response to the job resulting from an employee's appraisal of the job as fulfilling or congruent with individual's values" (p. 145). A person who is happy with his job is highly likely to continue with their job. There is a strong reverse association of job satisfaction with an individual's intention to leave the job. That is, a higher job satisfaction results in an individuals' lower turnover intentions [30]. Typically,

an employee would consider either leaving the company or changing the job within the same company when he/she is not satisfied with their work. Several studies have empirically demonstrated the effect of job satisfaction on individual's intention to leave the job [31][32][33]. For instance, Igbaria and Greenhaus [31] tested an integrated model of turnover intentions involving MIS (Management Information Systems) employees. Among other variables, job satisfaction found to influence turnover intentions negatively. In a meta-analysis of studies involving sales force, Brown and Peterson [32] found that a salesperson's job satisfaction indirectly influences their turnover intention. Most of the studies in this area have considered job satisfaction and its influence on turnover intention from a general employee standpoint. We believe that this relationship should be no different even in the case of an eLeader. Thus, an eLeader who is satisfied with his/her job would be willing to continue with the organization. Drawing from the extant literature, we propose

*e-Leader's satisfaction with their job is negatively related to their turnover intention.*

### 3.2. Technology Self-Efficacy

General self-efficacy of an individual, which has its origin in Social Cognitive Theory [34], is one's own assessment of their capabilities in performing a task. It is an individual's evaluation of his/her abilities in executing certain behaviors and is shown as a key influencing factor of human behavior. Within the information systems literature, self-efficacy has been shown to influence one's attitude towards technology use behavior [35][36]. Technology self-efficacy, a specific aspect of general self-efficacy, is defined as "the belief in one's ability to successfully perform a technologically sophisticated new task" [37, p.467]. It refers to how confidently one can use the technology in performing various tasks, including those that are complex, equivocal, and stressful. For instance, eLeaders should communicate and assign tasks to their teams using a complex technology stack. In addition, organizations that mandate adoption and use of new technology by all employees, specifically leaders who lack technology efficacy, can result in chronic stress leading to leadership turnover.

Within the marketing literature, it has been found that, compared to those with low technology self-efficacy, consumers with high degree of technology self-efficacy showed greater engagement with technology-based services [38]. Thus, technologically savvy eLeaders can develop virtual teams that engage

in discourse leading to their higher levels of job satisfaction.

eLeadership involves leading individuals or groups that are not co-located and communication among them happens primarily through technology [9]. In today's technology driven work environments, most of the task assignments and work happens using ICTs. In such a situation, it is vital for an eLeader to have high self-efficacy in using technology. Lack of technology self-efficacy may affect the individual's leadership abilities and resulting in low job satisfaction. Further, it is important to be able to communicate effectively and have a working understanding of how to use technology provided by the organization. Lack of technology knowledge can hinder an eLeader's ability to communicate with followers and thus shift follower's perceptions of appreciation and validation for the work they do.

For an eLeader, it is critical to have the ability and confidence in using technology, particularly ICT because an eLeader's daily tasks involve directing and guiding followers. Lack of self-efficacy in using ICT results in frustration and eventual lack of job satisfaction. Studies have shown that information technology self-efficacy leads to job satisfaction [7].

Technology self-efficacy among eLeaders plays an important part in applying information and communication technologies in their daily business activities. When leaders feel as their self-efficacy is valued, the heightened propensity to adopting new technology is. We feel that if an eLeader is comfortable with ICT and displays high self-efficacy, then eLeaders should have a higher job satisfaction and lowered desire to quit. Thus, we propose

*Technology self-efficacy of an e-Leader is positively related to their job satisfaction.*

### 3.3. eLeader's Organizational Engagement

Hierarchies are present in many types of organizations, and each hierarchy depends on the level of commitment of the individual member. Leadership commitment depends on the espoused values and support offered by the organization [2]. As an eLeader, much of the discourse that is used to support organizational commitment is done by use of ICT [8]. The espoused values of an organization would then need to include the requirements for integrating ICT and support both leader and follower in the use of ICT [9]. Organizational commitment to ICT integration support should then have a positive relationship to job satisfaction. Therefore, when an eLeader commits to ICT integration, he/she begins to show a positive relationship with organizational engagement.

Organizational engagement builds goal congruence and allows the leader to develop an increased understanding of how each member can contribute to the organization [39].

When the organization adopts a culture of ICT integration support, leadership can always have a technology expert that can assist the leader in integrating and troubleshooting their ICT questions. Providing eLeaders with ICT confidence should increase their organizational commitment and reduce the turnover intentions. eLeadership job satisfaction and retention of leadership talent should then result in organizational success and increased organizational engagement by both leaders and followers. Byproducts of such ICT integration support could include increased feelings of inclusion and organizational commitment. Thus, we propose:

*eLeader's organizational engagement is positively related to their job satisfaction.*

### **3.4. Transformational Leadership Ability**

Transformational Leadership refers to those leaders that “engages with others and creates a connection that raises the level of motivation and morality in both the leader and the follower” [40, p.172]. Organizations need to constantly evolve as to prevent stagnant growth and to contend with competing organizations [22]. To accomplish this, contemporary organizations are integrating ICT and requiring their leaders to do the same. Those leaders that desire to promote their organization must become eLeaders, and must then have transformational leadership traits. These eLeadership traits (such as transformational leadership abilities) help organizations succeed when integrating ICT.

Leaders interested in developing successful organization can use transformational leadership to build high achievement orientation, self-esteem, and risk-taking in their followers. eLeaders that focus on high achievement orientation develop virtual teams that are interested in building teams with the ability to have positive and objective reactions to tasks. Congruently, eLeaders that build virtual teams with high self-esteem are more likely to promote positive team environments and increased job satisfaction for both leader and follower. Finally, eLeaders are often required to ask their teams to take risks when working in teams that include taking on new projects and using new technologies [17]. ELeaders that promote risk-taking understand that there is a chance for error, and thus learn from risk-taking actions. These virtual teams then understand that errors do happen, and their leader

is there to promote learning instead of punitive action; resulting in job satisfaction.

When the eLeader uses transformational leadership qualities to enhance a followers' ability to integrate technology, both the leader and follower have the potential for increased job satisfaction [41]. Job satisfaction is then increased by the complementary increase in communication while using ICT. Developing an eLeader's transformational leadership or strategic (moving from the tactical-transactional leadership) ability should then reduce tensions felt by all member of an organization when asked to adopt ICT. A Move away from a tactical-transactional leadership style to the transformational leadership style also provides members of the organization with a feeling of community when working remotely [24] [42]. Use of transactional leadership can promote too much competition and promote a culture of individual values over organizational goals [25][26]. The reduction in tensions between leader and follower could then reduce levels of anxiety and frustrations leader can have when working in virtual teams. Thus,

*Transformational leadership ability of an eLeader is positively related to their job satisfaction*

## **4. Methodology**

### **4.1 Study Design**

In this section, we propose a study design for validating the research model. Data will be collected using anonymous online survey technique from leaders and followers in healthcare organizations. We define a leader to have at least five or more followers (subordinates) who are located at least 51 feet away from the leader so that the leader primarily interacts and manages the work using technology. The idea is that there will be minimal physical interaction and most of the communication and work happens through ICT.

### **4.2. Scale Development and Pilot Survey**

The unit of analysis for the study will be an individual – an eLeader – with a desire to obtain larger data sample for greater statistical power. Survey instruments and items for the constructs in the research model have been adapted from prior research. To avoid or minimize method bias [43], survey instrument will be refined through a multi-step process such as reviewing items with experts, re-wording items, and conducting a pilot survey before finalizing the survey. Research team will approach experts in the field to get

constructive feedback on the questionnaire design. This helps us understand any inherent problems in the questions that can confuse survey respondents leading to erroneous responses.

A preliminary version of the survey will be administered to a small group of individuals who fit into our criteria of a leader or follower. Pilot participants are asked to provide feedback on the wordings that are confusing, ambiguous, redundant, or distracting; interpretation of questions; and survey fatigue. Based on the input from pilot participants, survey items will be reworded to make them simple and easy to understand. We also intend to adjust the number of questions to minimize time required to complete the questionnaire so that the response rate can be improved [44]. Least cognitively demanding demographic questions will be included in the concluding section of the survey. Questions will be reverse coded at several places to minimize repetitiveness that reduces respondent motivation and cognitive engagement [43]. Attention checking questions will be included in the survey to ensure proper responses from the survey respondents.

Responses to all questions (unless otherwise noted) will be measured on either a five-point or seven-point Likert scale ranging from Strongly Disagree to Strongly Agree.

### **4.3. Survey Setting**

The purpose of this study is to understand the influencing factors of an eLeader's turnover intention. The research model developed to investigate our research question is not limited to any specific domain or industry. The survey respondents for this study will include individuals who lead virtual teams using ICT. Initially, we intend to survey leaders from healthcare organizations and later expand to other industries.

### **4.4. Model Variables**

The items in the survey questionnaire will be adapted from the extant literature. Changes will be made where necessary after receiving feedback from experts and pilot run. All the variables in the model will be measured using five-point Likert scale from strongly disagree (1) to strongly agree (5).

Turnover Intention refers to an eLeader's intention to leave their current job. The construct will be measured using a four-item scale adapted from Moore [45].

Job satisfaction is defined as the extent of eLeader's satisfaction with his or her job resulting from performing duties using ICT. We measure job

satisfaction with a five-item scale adapted from Moore and Venkatesh [29] and Rutner et al. [33].

Perceptions of organizational engagement is intended to understand how an eLeader's perceptions of their behavior relates to promoting positive organizational outcomes [46].

Leader's relationship with follower looks to define "how the quality of superior-subordinate relationships affects individual, interpersonal, and organization factors like job satisfaction, communication motives, and organizational identification [47].

Transformational leadership ability- examines an eLeader's attributes that address their ability to promote optimism and develop virtual team using ICT [48].

Technology self-efficacy refers to the extent of eLeader's ability and confidence in using ICT towards leading virtual teams and performing his/her duties. Technology self-efficacy will be measured using a scale adapted from Compeau & Higgins [49].

### **4.5. Control Variables**

Control variables, informed by the extant literature, will be included in the study to capture the covariance associated with the factors that do not directly contribute to the research model. These control variables include promotion, job stress, work environment, fringe benefits, operating conditions, co-workers, and demographic variables such as age, gender, and income.

### **4.6. Data Analysis**

The survey instrument for this study will include multiple questions and the survey method enables us to collect a multivariate dataset. A standard method is to use structural equation modeling (SEM) approach, which is mostly a confirmatory technique [50]. SEM is used to study the relationships among latent constructs that are indicated by multiple measures. In this study, we propose to use Partial Least Squares structural equation modeling (PLS-SEM), which is particularly suited for situations where data are non-normal, and the sample size is small [51].

## **5. Expected Results**

This research study is an attempt to explore the factors influencing an eLeader's intention to leave their job. Theoretically grounded in eLeadership literature, factors included in this study are eLeader's perceptions of organizational engagement, eLeader's relationship

with follower, transformational leadership ability, and eLeader's technology self-efficacy. Analysis of data collected from this study is expected to support our hypotheses. The results will provide an opportunity for deeper understanding of the role of the aforementioned factors and technology in influencing eLeader's job satisfaction and in turn their turnover intention. This study will enrich our understanding of eLeadership theory and will provide an opportunity to suggest future research direction. Implications for theory and practice from this research are expected to be significant and the findings from this research will add to the much-needed empirical research that the eLeadership theory is lacking.

## 6. Limitations

As with any research study, ours too is not devoid of any limitations. First limitation for this study is the survey methodology. Our research proposes to use a cross sectional survey to collect data from a population of eLeaders leading virtual teams. Using a longitudinal study could allow the researchers to understand how leaders build feelings of intentions to quit and be able to observe the actual turnover behavior. Second, although our research is not limited to a particular industry, we plan to collect data from within the healthcare domain initially. Third, the organizational culture of the organization participating in the study could also pose as a limitation to the study based on espoused values held by the organization. If organizations promote espoused values, develop eLeadership philosophy, or has developed a culture of technology adoption, then this could skew data collected from our surveys. Finally, leaders that have previously adopted learned leadership traits and organizational values that promote inclusion could then reduce employee intentions to quit.

## 7. Conclusions and Future Direction

eLeadership is an important factor in an organization's future success as it builds a leader's ability to collaborate with virtual teams and communicate effectively while using ICTs. For eLeaders to be successful, in addition to leadership skills and relationships with followers, their confidence in using ICT is critical to the success of the organization. Turnover of eLeadership negatively affects a business' productivity and performance. This research will demonstrate that eLeader's relationship with followers, their transformational leadership ability, organizational engagement, and technology self-efficacy play a key role in influencing their job

satisfaction directly and their turnover intentions indirectly.

Specifically, we intend to demonstrate that eLeader's confidence in adopting and using technology is a key factor in leading virtual teams. Organizations need to acknowledge this aspect because this aids them in designing training programs for eLeadership development.

Relationships with followers is expected to give eLeaders more job satisfaction, which can positively influence organizational performance. Building dyadic relationships between virtual team members can improve communication [2]. Therefore, training eLeaders on using technologies for synchronous communication enhances feedback loops, thus improving relationship with followers.

Our research will show that eLeader's organizational engagement and their transformational leadership abilities will result in their higher job satisfaction. Organizations should then design and implement programs tailored to developing eLeadership acumen and understanding for the core values of leading with ICT [52].

Research on eLeadership theory and turnover intentions as a construct have not yet been studied and thus we expect to develop a conversation and contribute to empirical research needed for the eLeadership theory. These relationships should provide the foundation for researchers looking to study eLeadership and turnover intentions. Finally, this research should help an organizations in devising training programs and establishing support mechanisms to ensure job satisfaction for eLeaders and in-turn enable them to perform well in their role [22]. Future direction to this research will include the study of multiple industries, building a framework for further eLeadership development.

## 7. References

- [1] Savolainen, Taina, "Trust Building in e-Leadership—Important Skill for Technology-Mediated Management in the 21st Century," in *Proceedings of the International Conference on Management, Leadership and Governance-ICMLG*, Bangkok University, acpi, UK., 2013, pp. 288–294.
- [2] B. J. AVOLIO and S. S. KAHAI, "Adding the 'E' to E-Leadership:: How it May Impact Your Leadership," *Organ. Dyn.*, vol. 31, no. 4, pp. 325–338, 2003.
- [3] J. Meloni, "Technologies for Teaching Online: Strategies and Pitfalls," *Chron. High. Educ.*, vol. 57, no. 11, pp. B22–B24, Oct. 2010.



- [4] B. J. Avolio, S. Kahai, and G. E. Dodge, "E-leadership: Implications for theory, research, and practice," *Leadersh. Q.*, vol. 11, no. 4, pp. 615–668, 2000.
- [5] Jameson, Jill, "Special issue on e-leadership: Editorial," *Br. J. Educ. Technol.*, vol. 44, no. 6, pp. 883–888, Nov. 2013.
- [6] J. J. Sosik, B. J. Avolio, S. S. Kahai, and D. I. Jung, "Computer-supported work group potency and effectiveness: the role of transformational leadership, anonymity, and task interdependence," *Comput. Hum. Behav.*, vol. 14, no. 3, pp. 491–511, 1998.
- [7] Y. Hwang, Y. Lee, and D.-H. Shin, "The role of goal awareness and information technology self-efficacy on job satisfaction of healthcare system users," *Behav. Inf. Technol.*, vol. 35, no. 7, pp. 1–11, Apr. 2016.
- [8] H. Tashiro, A. Lau, J. Mori, N. Fujii, and Y. Kajikawa, "E-mail networks and leadership performance," *J. Am. Soc. Inf. Sci. Technol.*, vol. 63, no. 3, pp. 600–606, Mar. 2012.
- [9] B. J. Avolio, F. O. Walumbwa, and T. J. Weber, "Leadership: Current Theories, Research, and Future Directions," *Annu. Rev. Psychol.*, vol. 60, no. 1, pp. 421–449, 2009.
- [10] K. Do-Hong, P. Wilkins, and D. Dunaway, "Creating virtual cooperative learning experiences for aspiring school leaders and practitioners with web 2.0," *Acad. Leadersh.*, vol. 15337812, no. 9, p. 3, 2011.
- [11] P. A. Balthazard, D. A. Waldman, and J. E. Warren, "Predictors of the emergence of transformational leadership in virtual decision teams," *Leadersh. Q.*, vol. 20, no. 5, pp. 651–663, 2009.
- [12] J. P. Currie and M. Ryan, "Complementing Traditional Leadership: The Value of Followership," *Ref. User Serv. Q.*, vol. 54, no. 2, pp. 15–18, 2014.
- [13] C. A. Brumm and S. Drury, "Leadership that Empowers: How Strategic Planning Relates to Followership," *Eng. Manag. J.*, vol. 25, no. 4, pp. 17–32, 2013.
- [14] C. Hopton, "Learning and Developing Followership," *J. Leadersh. Educ.*, vol. 13, no. 3, pp. 129–137, 2014.
- [15] D. Barnwell, S. Nedrick, E. Rudolph, M. Sesay, and W. Wellen, "Leadership of International and Virtual Project Teams," *Int. J. Glob. Bus.*, vol. 7, no. 2, pp. 1–8, 2014.
- [16] B. Kellerman, *Followership: How followers are creating change and changing leaders*. Harvard Business School Press Boston, 2008.
- [17] B. J. Avolio, "Promoting More Integrative Strategies for Leadership Theory-Building," *Am. Psychol.*, vol. 62, no. 1, pp. 25–33, Jan. 2007.
- [18] P. G. Malakyan, "Followership in Leadership Studies: A Case of Leader-Follower Trade Approach," *J. Leadersh. Stud.*, vol. 7, no. 4, pp. 6–22, Dec. 2014.
- [19] B. J. Avolio and W. L. Gardner, "Authentic leadership development: Getting to the root of positive forms of leadership," *Leadersh. Q.*, vol. 16, no. 3, pp. 315–338, 2005.
- [20] P. A. Balthazard, D. A. Waldman, R. W. Thatcher, and S. T. Hannah, "Differentiating transformational and non-transformational leaders on the basis of neurological imaging," *Leadersh. Q.*, vol. 23, no. 2, pp. 244–258, 2012.
- [21] B. M. Bass and B. J. Avolio, "Transformational Leadership And Organizational Culture," *Int. J. Public Adm.*, vol. 17, no. 3–4, pp. 541–554, 1994.
- [22] D. Gurr, "ICT, Leadership in Education and E-leadership," *Discourse Stud. Cult. Polit. Educ.*, vol. 25, no. 1, pp. 113–124, Mar. 2004.
- [23] N. Jawadi, M. Daassi, M. Favier, and M. Kalika, "Relationship building in virtual teams: A leadership behavioral complexity perspective," *Hum. Syst. Manag.*, vol. 32, no. 3, p. 199, 2013.
- [24] B. M. Bass, B. J. Avolio, and L. Atwater, "The Transformational and Transactional Leadership of Men and Women," *Appl. Psychol.*, vol. 45, no. 1, pp. 5–34, 1996.
- [25] B. J. Avolio, B. M. Bass, and D. I. Jung, "Re-examining the components of transformational and transactional leadership using the Multifactor Leadership Questionnaire," *J. Occup. Organ. Psychol.*, vol. 72, no. 4, p. 441, 1999.
- [26] F. O. Walumbwa, J. J. Lawler, and B. J. Avolio, "Leadership, Individual Differences, and Work-related Attitudes: A Cross-Culture Investigation," *Appl. Psychol. Int. Rev.*, vol. 56, no. 2, pp. 212–230, 2007.
- [27] E. Holloway and M. Kusy, "Detox Your Workplace," *Mark. Health Serv.*, vol. 30, no. 3, pp. 24–27, 2010.
- [28] B. M. Bass and R. E. Riggio, *Transformational leadership*, 2nd ed. Mahwah, N.J.: L. Erlbaum Associates, 2006.
- [29] M. G. Morris and V. Venkatesh, "Job Characteristics and Job Satisfaction: Understanding the Role of Enterprise Resource Planning System Implementation," *MIS Q.*, vol. 34, no. 1, pp. 143–161, Mar. 2010.
- [30] H. Tao, C. H. Ellenbecker, Y. Wang, and Y. Li, "Examining perception of job satisfaction and intention to leave among ICU nurses in China," *Int. J. Nurs. Sci.*, vol. 2, no. 2, pp. 140–148, 2015.

- [31] M. Igbaria and J. Greenhaus, "Determinants of MIS employees' turnover intentions: a structural equation model," *Commun. ACM*, vol. 35, no. 2, pp. 34–49, Feb. 1992.
- [32] S. P. Brown and R. A. Peterson, "Antecedents and Consequences of Salesperson Job Satisfaction: Meta-Analysis and Assessment of Causal Effects," *J. Mark. Res.*, vol. 30, no. 1, pp. 63–77, 1993.
- [33] P. Rutner, B. Hardgrave, and D. Mcknight, "EMOTIONAL DISSONANCE AND THE INFORMATION TECHNOLOGY PROFESSIONAL," *MIS Q.*, vol. 32, no. 3, Sep. 2008.
- [34] A. Bandura, *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ Prentice Hall, 1986.
- [35] V. Celik and E. Yesilyurt, "Attitudes to technology, perceived computer self-efficacy and computer anxiety as predictors of computer supported education," *Comput. Educ.*, vol. 60, no. 1, pp. 148–158, Jan. 2013.
- [36] M. S. Rahman, M. Ko, J. Warren, and D. Carpenter, "Healthcare Technology Self-Efficacy (HTSE) and its influence on individual attitude: An empirical study," *Comput. Hum. Behav.*, vol. 58, no. C, pp. 12–24, May 2016.
- [37] T. McDonald and M. Siegal, "The Effects of Technological Self-Efficacy and Job Focus on Job Performance, Attitudes, and Withdrawal Behaviors," *J. Psychol.*, vol. 126, no. 5, Sep. 1992.
- [38] P. Dabholkar and R. Bagozzi, "An attitudinal model of technology-based self-service: Moderating effects of consumer traits and situational factors," *J. Acad. Mark. Sci.*, vol. 30, no. 3, pp. 184–201, Jun. 2002.
- [39] D. De Clercq, D. Bouckennooghe, U. Raja, and G. Matsyborska, "Servant Leadership and Work Engagement: The Contingency Effects of Leader-Follower Social Capital," *Hum. Resour. Dev. Q.*, vol. 25, no. 2, pp. 183–212, 2014.
- [40] P. G. Northouse, *Leadership: Theory and practice*. Thousand Oaks, CA: Sage publications, 2018.
- [41] S. Kovjanic, S. C. Schuh, and K. Jonas, "Transformational leadership and performance: An experimental investigation of the mediating effects of basic needs satisfaction and work engagement," *J. Occup. Organ. Psychol.*, vol. 86, no. 4, pp. 543–555, Dec. 2013.
- [42] D. N. den Hartog, J. J. van Muijen, and P. L. Koopman, "Transactional versus transformational leadership: an analysis of the MLQ," *J. Occup. Organ. Psychol.*, vol. 70, no. 1, pp. 19–34, 1997.
- [43] S. B. MacKenzie and P. M. Podsakoff, "Common Method Bias in Marketing: Causes, Mechanisms, and Procedural Remedies," *J. Retail.*, vol. 88, no. 4, pp. 542–555, 2012.
- [44] M. T. Frohlich, "Techniques for improving response rates in OM survey research," *J. Oper. Manag.*, vol. 20, no. 1, pp. 53–62, 2002.
- [45] J. E. Moore, "ONE ROAD TO TURNOVER: AN EXAMINATION OF WORK EXHAUSTION IN TECHNOLOGY PROFESSIONALS," *MIS Q.*, vol. 24, no. 1, pp. 141–168, Mar. 2000.
- [46] W. B. Schaufeli, A. B. Bakker, and M. Salanova, "The Measurement of Work Engagement with a Short Questionnaire: A Cross-National Study," *Educ. Psychol. Meas.*, vol. 66, no. 4, pp. 701–716, 2006.
- [47] G. B. Graen and M. Uhl-Bien, "Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective," in *Leadership: The multiple-level approaches: Contemporary and alternative*, vol. 24, 1998, pp. 103–133.
- [48] B. J. Avolio and B. M. Bass, *MLQ: Multifactor leadership questionnaire*. Mind Garden, 2004.
- [49] D. R. Compeau and C. A. Higgins, "Computer Self-Efficacy: Development of a Measure and Initial Test," *MIS Q.*, vol. 19, no. 2, p. 189, Jun. 1995.
- [50] M. W. Gallagher and T. A. Brown, "Introduction to Confirmatory Factor Analysis and Structural Equation Modeling," in *Handbook of Quantitative Methods for Educational Research*, T. Teo, Ed. Rotterdam: SensePublishers, 2013, pp. 289–314.
- [51] J. F. Hair, M. Sarstedt, C. M. Ringle, and J. A. Mena, "An assessment of the use of partial least squares structural equation modeling in marketing research," *J. Acad. Mark. Sci.*, vol. 40, no. 3, pp. 414–433, Jun. 2011.
- [52] A. Abuhmaid, "ICT Training Courses for Teacher Professional Development in Jordan," *TOJET Turk. Online J. Educ. Technol.*, vol. 10, no. 4, 2011.